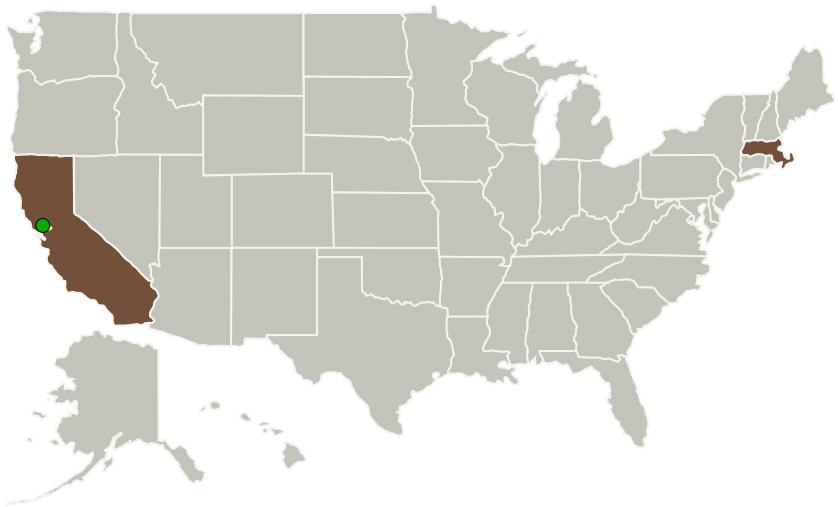
Use-Driven Testbed for Evaluating Systems and Technologies (U-TEST), Phase II

Completed Technology Project (2010 - 2012)

Project Introduction

NextGen will require the development of novel solutions to shape the airspace of tomorrow. Along with the ability to generate new systems and technologies comes the need to rigorously evaluate, and eventually validate, the effectiveness of these concepts. However, it is often challenging to translate simulation data into useful, integrated, and contextually-based assessments. Many critical findings are not identified for this reason, which could otherwise guide researchers toward advancements with NextGen technologies. Aptima proposes to develop the Use-driven Testbed for Evaluating Systems and Technologies (U-TEST), a flexible toolset that helps NextGen researchers to efficiently extract findings on pilot performance in simulated flight environments. Three primary components are: (1) context-capturing software will guide researchers to key events and allow important contextual information to be gathered for analysis; (2) a data integration platform that will automate organization of data sources into a format conducive to analysis; and (3) context-based analysis software that will enable deep, focused analysis by combining a quick-look function, an algorithm for focusing analysis, and context-based playback of key events and trials. U-TEST will be an extensible toolset that can help NextGen researchers improve the amount and quality of findings across a range of studies.

Primary U.S. Work Locations and Key Partners



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Organizations Performing Work	Role	Type	Location
Aptima, Inc.	Lead Organization	Industry	Woburn, Massachusetts
Ames Research Center(ARC)	Supporting Organization	NASA Center	Moffett Field, California

Primary U.S. Work Locations	
California	Massachusetts

Project Transitions

February 2010: Project Start

August 2012: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/139518)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Aptima, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

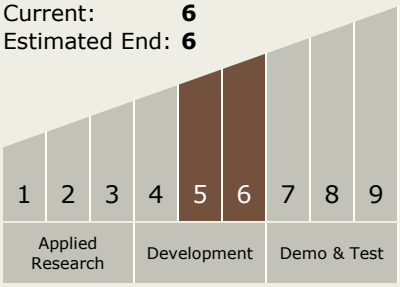
Carlos Torrez

Principal Investigator:

Kevin T Durkee

Technology Maturity (TRL)

Start: **5**
Current: **6**
Estimated End: **6**



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Technology Areas

Primary:

- TX11 Software, Modeling, Simulation, and Information Processing
  - TX11.4 Information Processing
    - TX11.4.4 Collaborative Science and Engineering

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System